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Cyndie Eby
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USWEST

Ex Parte Presentation

December 19, 1996

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. Room 222
Washington, D.C. 20554

RE: Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98

Dear Mr. Caton:

Attached hereto are two copies of a letter that was delivered today to Greg Rosston, Economist, Office of Plans and Policy, concerning the above-referenced proceeding.

In accordance with Commission Rule 1.1206(a)(1), two copies of the letter are being filed with you for inclusion in the public record. Acknowledgment and date of receipt are requested. A copy of this transmittal letter is provided for this purpose. Please contact me if you have questions.

Sincerely,

Cyndie Eby

Attachments

cc: Greg Rosston

U S WEST, Inc.
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Executive Director-
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U S WEST

December 19, 1996

Mr. Greg Rosston, Economist
Common Carrier Bureau
1919 M Street N.W., Room 500
Washington, D.C. 20554

Dear Mr. Rosston:

Attached is a copy of testimony of Robert G Harris on behalf of U S WEST Communications, Inc. filed before the Public Utilities Commission of the State of Colorado. This information is being provided as a follow-up to our meeting with you to discuss the above-referenced proceeding, on December 5, 1996.

If you have any questions please don't hesitate to give me a call.

Sincerely,

Cyndie Eby

Attachment

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

RE: THE INVESTIGATION AND SUSPENSION OF TARIFF SHEETS FILED BY U S WEST COMMUNICATIONS, INC. WITH ADVICE LETTER NO 2617 REGARDING TARIFFS FOR INTERCONNECTION, LOCAL TERMINATION, UNBUNDING, AND RESALE OF SERVICES.	)	DOCKET NO. 96S-331T

TESTIMONY OF ROBERT G. HARRIS

ON BEHALF OF U S WEST COMMUNICATIONS INC.

DECEMBER 13, 1996

TESTIMONY OF ROBERT G. HARRIS

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I. EXECUTIVE SUMMARY

Q. COULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A. In the context of the Telecommunications Act of 1996 and the confines of the FCC Report and Order 96-325 implementing certain provisions of the Act, my testimony supports U S WEST's proposed permanent interconnection tariff. Section I is the executive summary. Section II presents my professional qualifications.

Section III reviews the economic reasoning underlying the Telecommunications Act of 1996, providing a federal regulatory and statutory context for the proceeding. There are two main thrusts of the Act: (1) open all telecommunications services to fair and efficient competition by removing legal and regulatory barriers to cross-entry from one line of telecommunications business to others; and (2) rely on negotiated or arbitrated agreements among parties, rather than command-and-control regulations, to promote cooperation and ensure interconnection and interoperability of the "network of networks."

In subsequent sections, I show that there are several respects in which the FCC Order is contrary to the economic and policy precepts of the Act, is based on faulty economics, or is logically inconsistent. Given these deficiencies, the FCC Order would put U S WEST at an enormous competitive disadvantage *vis-à-vis* AT&T and other competing local exchange carriers and should, therefore, be overturned. Because of the potentially devastating financial consequences of these provisions of the Order, I understand that U S WEST has appealed some of the provisions of the Order.[1] As an economist, I agree

[1] On October 15, 1996, the Eighth Circuit Court of Appeals stayed those provisions of the FCC Order pertaining to pricing, and the Most Favored Nation (MFN) clause which allows new entrants to "pick and choose" the most favorable provisions from any interconnection agreement signed by the incumbent LEC (Hereafter, the Court of

with U S WEST that these provisions are contrary to the public interest, and urge that this Commission not implement these provisions while they are under appeal. U S WEST is also asking this Commission to exercise its jurisdictional authority by approving an interconnection tariff that does not necessarily comply with the FCC Order in all respects.

Section IV provides a brief assessment of the competitive landscape facing U S WEST, including the reasons why U S WEST has a highly vulnerable revenue stream in the local exchange market. This section then analyzes the competitive strengths and likely strategy of MCI, post-merger with BT, in Colorado's local exchange market. An analysis of the U K's regulatory regime, considered one of the most open and competitive in the world, highlights the importance of setting prices for unbundled elements and resold services based on the full economic cost of providing these services.

Section V explains what "sham unbundling is (i.e., the purchase of a service for resale at unbundled prices, rather than the wholesale prices specified in the Act), why it is contrary to the economic intent underlying the Telecom Act, and why the Colorado Commission should exercise its jurisdictional authority by prohibiting new entrants from "sham unbundling" under the terms of the interconnection tariff. Also, vertical switch features should be considered services, not part of the unbundled switching function as ruled by the FCC.

Appeals decision will be referred to as "the stay"). The Order's pricing provisions that were stayed include the FCC's proxy prices for Unbundled Network Elements, the avoided cost wholesale discount, and the FCC's TELRIC methodologies. U S WEST's concerns about those provisions are therefore deferred until the Court acts to lift the stay. Thus, this testimony has been edited to remove much of the discussion around those issues, but U S WEST will seek to offer testimony on those issues when and if those FCC provisions become effective. Testimony which was removed to reflect the stay was placed in the appendix.

In Section VI, I discuss the costing principles and methodologies for unbundled network elements. Section VI.A presents concepts underlying economic costing methods and the economic principles required by the FCC Order to implement "total element long-run incremental cost" (TELRIC). Although the pricing provisions of the FCC Order have been stayed, TELRIC is an appropriate economic methodology for determining unbundling and interconnection costs. The TELRIC methodology: (1) assumes the use of best available technology within the limits of existing network facilities; (2) makes realistic assumptions about capacity utilization rates, spare capacity, and fill factors; (3) employs a forward-looking, risk-adjusted cost of capital; (4) uses economic depreciation rates for capital recovery; and (5) properly attributes indirect expenses to network elements on a cost-causative basis. In addition, I explain why it is appropriate to include a markup above TELRIC in the price of network elements as a contribution to U S WEST's shared and common costs, consistent with the FCC Order.

Section VI.B presents four additional costing principles which are necessary to obtain correct TELRIC estimates. These principles are: (1) the use of realistic assumptions about the field conditions under which network construction would actually take place; (2) the use of realistic assumptions about the engineering economics of the network; (3) the use of forward looking operating expenses; and (4) the costs of unbundling should be included in any incremental cost estimates.

Section VI.C explains, in general, some of the flaws in the Hatfield Model which is likely to be submitted by AT&T and MCI in this proceeding. There are three key elements to any cost model: (1) input data related to the cost being estimated, (2) the mathematical algorithm which calculates the cost output based on the input data and (3) the user

supplied parameters which adopt the algorithm to fit the specific circumstances for which the cost is being estimated. The Hatfield Model has errors in each of these three areas.

Section VI.D provides a more detailed critique of the Hatfield Model's investment calculations explaining that the model's inputs, assumptions, and user defined parameters have been set in such a way as to violate the economic costing principles set out earlier in my testimony. Among other flaws, the Hatfield Model uses unrealistic assumptions about shared structure, drop costs, the costs of unbundling, and fill factors. If these parameters are corrected to reflect economically reasonable assumptions, the Hatfield Model produces results which are very similar to U S WEST's RLCAP (loop) model. Section VI.E shows that if more reasonable depreciation lives and the cost of capital parameters are used in the Hatfield Model, it comes up with monthly loop costs which are similar to RLCAP's costs.

Section VI.F explains how U S WEST's TELRIC cost studies for network elements are based on the sound economic costing principles presented earlier. Section VI.G gives examples of market and sanity tests that demonstrate that U S WEST's cost studies reasonably represent the cost of building a network with forward-looking technology.

Section VII rebuts the pricing proposals likely to be put forward by new entrants for unbundled network elements. Because pricing below TELRIC plus joint and common costs promotes inefficiency and exacerbates price arbitrage, I explain why it is critical that U S WEST should be allowed to price network elements to recover full economic costs, including a contribution to joint and common costs, in addition to the costs of unbundling the network elements. Also, I explain why U S WEST should be allowed to recover prudently incurred embedded costs such as the depreciation reserve deficiency

during the transitional period to a more fully competitive local exchange environment. In other industries such as electricity transmission, such costs have been recovered during the transition to a competitive market.

Section VIII addresses issues related to the resale of U S WEST's services. I show why U S WEST's wholesale prices should not be based on its discounted retail prices, as required by the FCC Order, i.e., double discounting. Because U S WEST's retail price discounts reflect the lower unit costs of retailing services to larger volume users, the wholesale discount should be based on the undiscounted retail price of the service.

The need for economically sound pricing of call termination is addressed in Section IX. I show why new entrants' requests for using a bill and keep regime to pay for call termination is economically inefficient and without precedent in other industries. I explain that, consistent with the FCC Order, call termination is a separate network element from tandem switching and transport and should therefore be separately priced. U S WEST's proposed prices are based on the TELRIC of termination and transport, including a contribution to joint and common costs.

Section X concludes the body of my testimony by explaining that this tariff proceeding involves far more than the private interests of competing companies. The public also has a vital interest in the outcome of this proceeding. The ubiquitous telecommunications network is the backbone of the national information infrastructure, the "central nervous system" of the information economy. U S WEST has invested billions of dollars in that infrastructure under a very different regulatory regime. Now, the nation has embarked on a new course in telecommunications, toward open competition and interconnection as the means of stimulating further investment in the infrastructure and even greater innovation

of new services and technologies. However, make no mistake about it: unless the prices of network elements and the wholesale prices of resale services cover their respective economic costs, entrants will make biased choices, buying existing facilities rather than building new ones. In so doing, the future of the nation's information infrastructure is put at risk.

There is no need to take such risk. By implementing a permanent interconnection tariff that is balanced and fair to both parties, the Commission can advance the cause of competition while preserving economic incentives for investment and innovation. By approving prices that are sufficient to cover full economic costs, the Commission can ensure that entrants will make efficient choices to "build or buy," because they pay the true social costs of their decisions. By approving an interconnection tariff that allows U S WEST to put reasonable restrictions on the use of unbundled network elements and does not require that U S WEST offer wholesale discounts on services that are retailed at prices below cost, the Commission can reduce the incidence of pure price arbitrage and its consequential harm to the retail customers and shareholders of U S WEST. By approving a tariff that includes reasonable reciprocal obligations on new entrants, the Commission can ensure that all of the telecommunications customers can enjoy the full benefits of competition.

Section XI, the Appendix contains portions of my testimony, which were removed from the body of the testimony, to reflect the stay. Section XI.A addresses why the FCC's Most Favored Nation Clause is economically inappropriate. Section XI.B criticizes the state commission orders and studies on which the proxy prices were based. Section XI.C criticizes the FCC's resale proxy discounts.

Q. WHICH PARTS OF THE FCC ORDER WERE STAYED BY THE EIGHTH CIRCUIT COURT OF APPEALS?

A. The Eighth Circuit Court of Appeals stayed those provisions of the FCC Order pertaining to pricing and the Most Favored Nation clause which allows new entrants to "pick and choose" the most favorable provisions from any interconnection agreement signed by the incumbent LEC. The pricing provisions which were stayed include the FCC's proxy prices for unbundled network elements, the avoided cost wholesale discount, and the TELRIC methodologies.

Q. DOES THE STAY RECOGNIZE THE DANGER OF SETTING PRICES FOR UNBUNDLED NETWORK ELEMENTS OR WHOLESALE SERVICES FOR RESALE BELOW U S WEST'S COST OF PROVIDING THOSE ELEMENTS OR SERVICE?

A. Prices set at below cost would cause substantial economic and financial harm for U S WEST. No business can afford to sell its products and services at rates, such as the FCC's proxy prices and the prices suggested by new entrants, which are below cost. This potential for irreparable harm was one of the reasons explicitly cited by the Eighth Circuit court of appeals for staying the FCC Order.

> "[W]e are persuaded that, absent a stay, *the proxy rates would frequently be imposed by state commissions and would result in many incumbent LECs suffering economic losses beyond those inherent in the transition from a monopolistic market to a competitive one...* In this case, the incumbent LECs would not be able to bring a lawsuit to recover their undue economic losses if the FCC's rules are eventually overturned, and we believe the incumbent LECs would be unable to fully recover such losses merely through their participation in the market. Moreover, the petitioners' potential loss of consumer goodwill qualifies *as irreparable harm...* [W]e believe that the petitioners have *adequately demonstrated*

that they will be irreparably harmed if a stay of the FCC's pricing rules is not granted.[italics added]"[2]

Q. SHOULD THE COLORADO COMMISSION USE THE PRINCIPLES UNDERLYING THE FCC'S STAYED TELRIC COSTING METHODOLOGY?

A. Yes. It is important to emphasize that, despite the stay and the other flaws in the FCC Order, the FCC's TELRIC costing principles are based on sound economics and should be considered appropriate guidelines for calculating the forward-looking incremental costs of unbundled network elements, but only if those principles and that methodology are applied in a reasonable manner, i.e., one which reflects the economic realities of constructing and operating local exchange telephone facilities. I would like to point out that while I agree with the principles established by and underlying TELRIC, I do not necessarily agree with the manner in which they have been applied and interpreted, by new entrants and in state arbitration proceedings. For example, I do not agree that TELRIC requires an assumption that the network be instantaneously and entirely reconstructed using forward looking technology. In many cases a more specific application of the TELRIC principles by the FCC would have made TELRIC a more useful methodology for calculating incremental costs.

The Colorado Commission should rely on cost models, such as the U S WEST cost studies, which reflect economically sound costing principles for determining the cost of unbundled network elements. Prices for unbundled network elements should be based on, not set at, TELRIC, with a mark up to recover a reasonable portion of shared and common costs. In some cases it may be necessary to include a transitional markup above TELRIC to recover prudently incurred embedded costs.

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[2] Eighth Circuit Court of Appeals Order Granting Stay, October 15, 1996, pg. 15.

II. QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND POSITION.

A.. My name is Robert G. Harris. I am a Principal at the Law and Economics Consulting Group and Professor Emeritus of Business and Public Policy in the Haas School of Business, University of California, Berkeley. My business address is 2000 Powell Street, Suite 600, Emeryville, CA 94608.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS.

A. I earned Bachelor of Arts and Master of Arts degrees in Social Science from Michigan State University and Master of Arts and Doctor of Philosophy degrees in Economics from the University of California, Berkeley. I currently serve as Co-Director of the Consortium for Research in Telecommunications Policy, a collaborative program of the University of California at Berkeley, the University of Chicago, the University of Michigan and Northwestern University. At Berkeley, I have taught courses at the undergraduate, MBA and Ph.D. levels, including Antitrust and Economic Regulation, Managerial Economics, Competitive Strategy and Telecommunications Policy. For several years, I taught a course on telecommunications for the staff of the California Public Utilities Commission and a course on telecommunications policy and competitive strategies for business managers from the United States and abroad.

My academic research has analyzed the effects of economic regulation and antitrust policy on industry performance, and the implication of changing economics and technology for public policies in transportation and telecommunications. I have published dozens of academic articles on antitrust policy, regulatory policy, telecommunications policy, technological innovation, the economics of telecommunications and

transportation, and the development of competition and interconnection policies in local access and exchange services.

As an advisor to the U. S. Department of Transportation from 1976-79, I assisted in the drafting of legislation that was passed by Congress in 1980, reforming regulation of the motor carrier and railroad industries. While on leave from the University of California in 1980-81, I served as a Deputy Director for Cost, Economic and Financial Analysis at the Interstate Commerce Commission and was centrally involved in several major rule makings implementing the motor carrier and railroad regulatory reform acts of 1980, and I also directed the development of the Uniform Rail Costing System. I have also served as a consultant to the U.S. General Accounting Office, the U. S. Office of Technology Assessment, the U. S. Department of Justice, the California Attorney General and the California Department of Consumer Affairs. I have recently advised the Economic Planning Agency of Japan on the reform of Japanese telecommunications policies.

I have testified on telephone rate design, costing and pricing principles, price cap regulation and local competition and interconnection policy before the Federal Communications Commission and the state commissions of California, Colorado, the District of Columbia, Illinois, Indiana, Iowa, Kansas, Michigan, Nevada, Ohio, Oregon, Pennsylvania, Tennessee, Utah, Virginia, Washington and Wisconsin. I have testified before the telecommunications regulatory authorities in Canada and Mexico and before the United States Senate, the United States House of Representatives and the Joint Economic Committee of Congress on transportation, antitrust and telecommunications policy issues. I have testified on costing methods, competition policy and standards of maximum rate reasonableness, on behalf of several major shippers before the Interstate

Commerce Commission. My professional qualifications are detailed in my curriculum vitae, which is attached as Exhibit I.

III. STATUTORY AND REGULATORY CONTEXT OF THIS PROCEEDING

Q. DID THE STATE OF COLORADO MAKE SUBSTANTIAL PROGRESS IN OPENING LOCAL EXCHANGE MARKETS PRIOR TO THE FCC'S 96-98 ORDER?

A. Yes. The Colorado Legislature passed House Bill 1335 in 1995 which ordered the opening of the local exchange market in the state. In response to this legislation, the Colorado Public Utilities Commission has implemented rule makings on interconnection, unbundling, resale of incumbent's services, number portability, and a high cost universal service fund. Thus, in Colorado, many of the key policy decisions surrounding local competition were already being made prior to the issuance of FCC Order 96-98.

Q. WHAT IS THE RELEVANCE OF THE TELECOMMUNICATIONS ACT OF 1996 TO YOUR TESTIMONY?

A. I have assessed the economic merits of the U S WEST's proposed interconnection tariffs in light of the public policy objectives and provisions of the Act, which represents a fundamental shift in public policies toward the telecommunications and information sector of our economy. Prior policies "compartmentalized" telecommunications industries and protected firms in various lines of business from competitive entry by firms in other lines of business. The central policy tenet of the Act is that all telecommunications companies should be allowed to compete in any and all lines of telecommunications businesses. Allowing and promoting competition in all telecommunications services increases consumer choices, promotes investment in the

nation's information infrastructure, and provides incentives for innovation and new services. The Act also provides a framework for encouraging cooperation among competing carriers, recognizing that the multiple operators of the emerging "network of networks" must work together to ensure that the nation's information infrastructure and telecommunications systems will continue to be the most advanced and reliable in the world.

Q. HOW DOES THE ACT PROMOTE COMPETITION?

A. The Act promotes competition by eliminating the legal and regulatory barriers that have inhibited or prohibited companies from entering certain other lines of business. The Act sweeps away legal and regulatory impediments to competition and cross-entry (although some of the restrictions are continued in a transitional regulatory form). The Act also seeks to accelerate entry and the development of local competition by allowing entrants to resell the services of incumbent LECs and by requiring incumbent LECs to "unbundle" certain network elements so that entrants can combine those unbundled elements with their own network elements to produce a range of services for end users.

Q. HOW DOES THE ACT PROMOTE COOPERATION?

A. The Act attempts to promote cooperation among competitors by expressing a strong preference for private negotiations and agreements and by providing a framework for resolving disputes that may arise in the process of reaching an agreement, viz., an arbitration process. To ensure that those agreements serve the public interest, as well as the private interests of the parties, the Act requires regulatory approval of the agreements, whether reached through negotiation or by arbitration.

Q. FROM AN ECONOMIST'S PERSPECTIVE, IS THE FCC ORDER 96-98 CONSISTENT WITH THE OBJECTIVES AND PROVISIONS OF THE ACT IN PROMOTING COMPETITION AND COOPERATION?

A. No, it is not. Overall, the FCC Order goes beyond the public policy objectives and economic principles of competition embodied in the Act. In the name of promoting competition, it imposes burdensome rules and requirements that will actually inhibit efficient competition and unfairly disadvantage incumbent LECs in the marketplace. In some cases, the FCC Order is based on faulty economic logic or is logically inconsistent, as I will show in subsequent sections. On October 15, the Eight Circuit Court of Appeals stayed the effectiveness of the pricing provisions and the Most Favored Nation (MFN) provision of the FCC Order. I will therefore not discuss the problems with the MFN provisions as they are not applicable to this proceeding.

Q. IS U S WEST'S PERMANENT INTERCONNECTION TARIFF COMPATIBLE WITH THE FCC ORDER?

A. In most cases it is. Furthermore, certain proposals which were inconsistent with the FCC Order related to the portions of the FCC Order which are now stayed. But in certain instances, I understand that U S WEST is requesting that the state commission assert its intrastate jurisdictional authority and implement economically sound policies. It is important to note that U S WEST's cost estimates do comply with the FCC's TELRIC costing principles. Most of the prices for unbundled network elements, including the loop, are set based on TELRIC with a markup for shared and common costs. However, as I explain later in my testimony, the prices for end office and tandem switching include an additional temporary rate element designed to recover the depreciation reserve deficiency. Contrary to the FCC Order, it is economically appropriate to recover these types of prudently incurred embedded costs during the transition to a more fully

competitive environment. The U S WEST prices for unbundled network elements should be adopted because they are based on an economically sound costing and pricing methodology.

Q. WHY ARE THE UNBUNDLING AND RESALE PROVISIONS OF THE FCC ORDER CONTRARY TO THE PUBLIC INTEREST?

A. The FCC Order relies on incumbent LECs providing access to and expanding the capacity of their network facilities through unbundling and resale. Yet, ironically, the Order goes so far that it substantially reduces the economic incentive and the necessary cash flow for U S WEST to continue to invest in its network. Competition promotes efficiency by driving prices toward costs, but efficient competition will not develop and cannot succeed if some firms must sell their outputs at prices that are below cost. Thus, for example, by setting default prices for unbundled network elements below actual cost, or allowing "sham unbundling," the FCC has risked stifling investment and innovation. Importantly, the wholesale pricing proxies have been stayed, thus addressing, at least for now, U S WEST's concerns about the FCC's 17-25% proxy discount.

Q. IN THIS TESTIMONY YOU CRITICIZE PARTS OF THE FCC'S INTERCONNECTION AND LOCAL COMPETITION ORDER. DOES THIS MEAN YOU DISAGREE WITH THE UNDERLYING PURPOSE OF TELECOMMUNICATIONS ACT?

A. No. I agree with the intention of the Telecommunications Act of 1996 to promote economic growth, infrastructure investment, consumer choice, competition and cross-entry into different segments of the telecommunications industry. However, I agree with the Amici Curie brief submitted by Congressmen John Dingell, W.J. Tauzin, Rich Boucher, and Dennis Hastert, the members of the House Commerce Committee who

explain that many of the specific policies set out in the FCC Order, such as sham unbundling, violate the intent of the Telecom Act:

> Congress carefully balanced the interests of incumbent local carriers and new entrants when it drew up the 1996 Act. The conference committee hammered out critical compromises that were designed to give all carriers, old and new, a fair chance to compete.
>
> But a rational new entrant will not spend the money to install facilities if it has a guaranteed competitive advantage when it uses the incumbent's network. And the incumbent will not invest in upgrading its facilities when its competitors get the greatest benefit from that investment. Neither side would have an incentive to build or invest. Congress' whole plan for job creation and economic growth would be frustrated.[3]

Q. DOES U S WEST HAVE STATE REGULATORY OBLIGATIONS WHICH SHOULD BE CONSIDERED BY THE COMMISSION WHEN SETTING TERMS AND CONDITIONS FOR UNBUNDLED NETWORK ELEMENTS AND RESOLD LOCAL EXCHANGE SERVICES?

A. Yes. U S WEST already faces asymmetric state regulatory obligations which new entrants need not meet; these obligations should be considered when setting prices for unbundled network elements and wholesale service. For example, U S WEST must retail its local exchange service to residential customers at geographically averaged rates below cost to promote universal service. More generally, U S WEST's rate structure is unbalanced and contains numerous cross-subsidies. Certain classes of customers subsidize other classes (such as business customers subsidizing residential; urban subsidizing rural; high volume users of access services subsidizing low volume users and users of vertical features subsidizing basic service only subscribers). Additionally, U S WEST must serve all customers in its service areas who request service (the carrier-

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[3] Dingell, John D., M.C., W. J. Tauzin, M.C., Rick Boucher, M.C., and Dennis Hastert, M.C., "Brief of Amici Curiae before the United States Court of Appeals for the Eighth Circuit, No. 96-3321," pg. 4.

of-last-resort obligation) and provide near instant service upon request by new customers (the ready-to-serve obligation). These obligations impose costs on U S WEST that new entrants do not face. Retail prices for many of the services which will be unbundled or resold have been set at levels substantially above cost in order to pay for these state regulatory obligations. Hence, in weighing the merits of U S WEST's position, the Commission should consider these state regulatory obligations and the need to rebalance U S WEST's retail rates prior to the unbundling or resale of elements or services which provide the source of the subsidies.

IV. COMPETITIVE ENVIRONMENT AND COMPETITORS FACING U S WEST

A. STATE REGULATORY CONDITIONS AND COMPETITIVE ENTRY

Q. WHY ARE U S WEST'S REVENUES VULNERABLE TO COMPETITIVE ENTRY?

A. Apart from the competitive vulnerabilities caused by the FCC Order, there are three main reasons why U S WEST's revenue stream is vulnerable to competitive entry. Although these reasons apply to most incumbent LECs, the first two apply more strongly to U S WEST than other incumbents. First, U S WEST's current rate structure is highly imbalanced with some rates priced below cost and others priced substantially above cost and most services priced at state-wide average rates despite dramatic differences in cost across geography. Cross-subsidies flow from urban to rural, high use to low use, and business to residential customers. Rates which are held substantially above cost by state regulation, such as local exchange service for urban business customers and vertical features, provide a "price umbrella" for new entrants who can underprice incumbents even if the new entrant's costs are higher than the incumbent's. The second reason that

U S WEST is vulnerable is that U S WEST is more strictly regulated than other incumbent LECs, which means it will have less flexibility in responding to changing customer demands and market conditions. The third main reason that U S WEST is vulnerable to competition is that its revenues are highly concentrated among a small number of customers in a few wire centers. In Colorado, U S WEST's gets over 70% of its revenues from only 20% of its wire centers.

Q. ARE YOU GOING TO ANALYZE THE COMPETITIVE POSITIONS OF ALL THE MAJOR NEW ENTRANTS INTO THE LOCAL EXCHANGE IN COLORADO?

A. No. In earlier arbitration testimony submitted recently to this commission, I analyzed the competitive advantages of all the major competitors to U S WEST in Colorado. To avoid repetition I only generically summarized the primary regulatory reasons for U S WEST's competitive vulnerability in Colorado. Below I provide a summary of competitors' actual networks in Colorado. The Commission should keep in mind that the cumulative effect of entry and competition in the Colorado local exchange market will be vast, even though the incremental effect resulting from any single entrant or known group of entrants maybe small. It is thus important to realize that the scale of entry and the subsequent potential financial losses suffered by U S WEST will be much larger than could be anticipated by analyzing any single entrant or class of entrants. Additionally, I provide an updated analysis of MCI's competitive strengths based on the recently announced merger with BT. This also provides a useful opportunity to draw some parallels between telecommunications regulation in the U.K., which is widely considered to be a highly competitive market, and U.S. markets.

Q. CAN YOU DESCRIBE NEW ENTRANTS' NETWORKS IN COLORADO?

A. Yes. Many new entrants already have or are constructing networks in Colorado. MFS, for example, is currently constructing over 90 route miles of fiber in the Denver metropolitan area.[4] According to a TCG witness in the consolidated Colorado interconnection arbitration proceeding, TCG has "approximately 230 miles, sheath miles, of fiber installed...[and] is in the process of installing a switch" which will be located in downtown Denver. Their network "is concentrated in the greater Denver metro area, with some extending to Boulder."[5] MCI is building a SONET Fiber ring in downtown Denver, and "also ha[s] a switch being installed in downtown Denver."[6]

B. MCI'S COMPETITIVE ADVANTAGES, ENTRY STRATEGY, AND THE EFFECT OF BRITISH TELECOM MERGER

Q. CAN YOU DESCRIBE MCI'S COMPETITIVE ADVANTAGES AND LIKELY STRATEGY FOR ENTERING THE LOCAL EXCHANGE MARKET IN COLORADO?

A. MCI has many advantages: substantial financial resources, brand name recognition, a large customer base, substantial marketing skill, and the ability to provide one-stop shopping. MCI clearly has the financial resources as well as technical and marketing know-how to compete effectively with U S WEST. MCI along with its prospective

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[4] Before the Colorado Public Utilities Commission, "Oral Testimony of Robert Munoz on Behalf of MFS," Docket No. 96A-287T, September 26, 1996, pp. 268-269.

[5] Before the Colorado Public Utilities Commission, "Oral Testimony of Jim Washington," Docket No. 96A-329T, September 30, 1996, pg. 34.

[6] Before the Colorado Public Utilities Commission, "Oral Testimony of David Agatston," Docket No. 96A-366T, October 1, 1996, pg. 268.

parent BT, has a cash flow which is twice U S WEST's.[7] The $4 billion infusion of capital by BT two years ago provides MCI with considerable resources to enter the local market. Moreover, MCI has developed aggressive and creative marketing strategies. Friends and Family discounts and 1-800-Collect are two programs that were very effective for MCI in gaining customers. With billions of dollars at stake in local exchange services, there is no question that MCI will use its marketing expertise to win customers.

MCI is likely to employ a dual strategy, reselling U S WEST's local service to residential and business customers and building facilities for the highest volume business customers in large cities through its subsidiary MCImetro. MCImetro is wholly owned by MCI and was established in 1994 to be "a full-service local telephone company."[8] As of December 1995, MCImetro had constructed 38 operational networks in 25 cities and had installed ten Class 5 local switches. MCImetro, which already has a network operating in Denver,[9] announced that it would spend $1 billion by the end of 1996 in efforts to expand both existing service areas and to add 13 new markets to its network, resulting in a total coverage of 45% of the nation's business customers.[10] MCImetro's initial local service products include basic local exchange service, business lines (including a "feature rich" line provisioned like Centrex), private branch exchange (PBX) trunks and access services to businesses.[11]

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[7] "British Telecommunications PLC ("BT") to Merge With MCI", BT News Release, November 3, 1996.

[8] "MCI Details Local Plans," *Information Week*, May 2, 1994, p. 18.

[9] "The Inside Scoop on Competitive Network Locations", Local Competition Report, 7/22/96.

[10] "MCI Says it Will Provide Switched Local Service in 13 More Cities," *Washington Telecom Newswire*, August 27, 1996.

[11] MCI 1995 Annual Report, pp. 9-10 and MCI marketing brochures.

Within the last year, MCI acquired Nationwide Cellular, the nation's largest cellular reseller[12] and has begun offering packages of long distance and cellular services.[13] In addition, MCI recently added PCS services to its potential service offerings through an agreement with Nextwave Telecom, Inc., the largest bidder in the recent C-Block PCS auctions. Through the agreement, MCI will purchase 10 billion PCS minutes to market in combination with other services under the MCI brand name.[14] The company also recently won a federal auction for a satellite slot to provide television service through a joint venture with News Corp.[15] In April of 1996, MCI introduced MCIOne, which is a variety of integrated packages combining services such as long distance calling, cellular, Internet access and service, One Number routing, home security, paging service, and a calling card, all on the same bill.[16] Some MCIOne packages are designed for businesses, others for consumers.

Q. HOW WOULD THE PROPOSED BT-MCI MERGER AFFECT THE LOCAL EXCHANGE MARKET IN THE UNITED STATES?

A. The proposed merger increases the possibility that U S WEST will be placed at a competitive disadvantage *vis-à-vis* MCI, and makes it more imperative for this

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[12] "MCI Gains Wireless Access to 75 Percent of U.S. Market," *The Reuters Business Report*, August 2, 1995. The five cellular partners are: GTE Mobilnet, BellSouth, AT&T's McCaw, Frontier Corp. and NewPar (a joint venture between AirTouch and Cellular Communications).

[13] "MCI Gains Wireless Access to 75 Percent of U.S. Market," *The Reuters Business Report*, August 2, 1995.

[14] Lawrence M. Fisher, "MCI Joins Nextwave in Wireless Communications Venture," *New York Times*, August 27, 1996, p. C4.

[15] "MCI, News Corp. Announce Joint Venture for DBS Service," *Washington Telecom Newswire*, January 25, 1996.

[16] "MCI Taps Industry 'All Stars' To Support MCI One; With One Call Consumers Get State-of the-Art Products, Award Winning Service", *PR Newswire*, April 29, 1996.